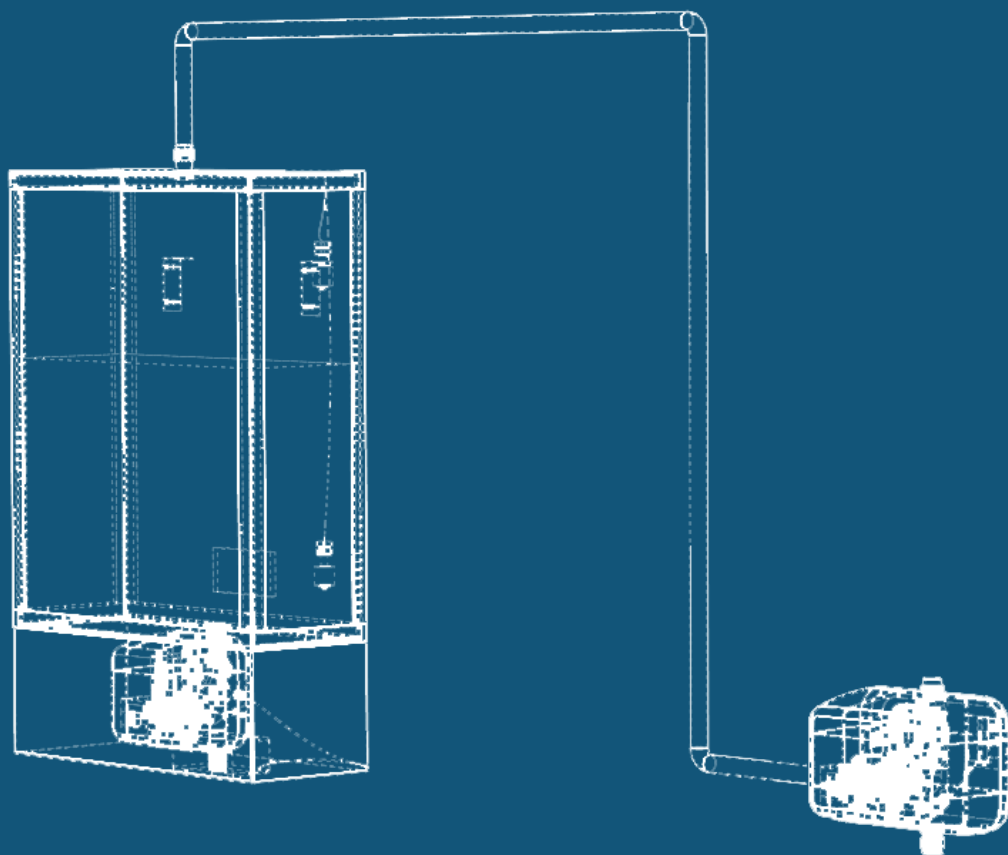


# AZUL LOOP



## User Manual





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# Introduction to Azuloop

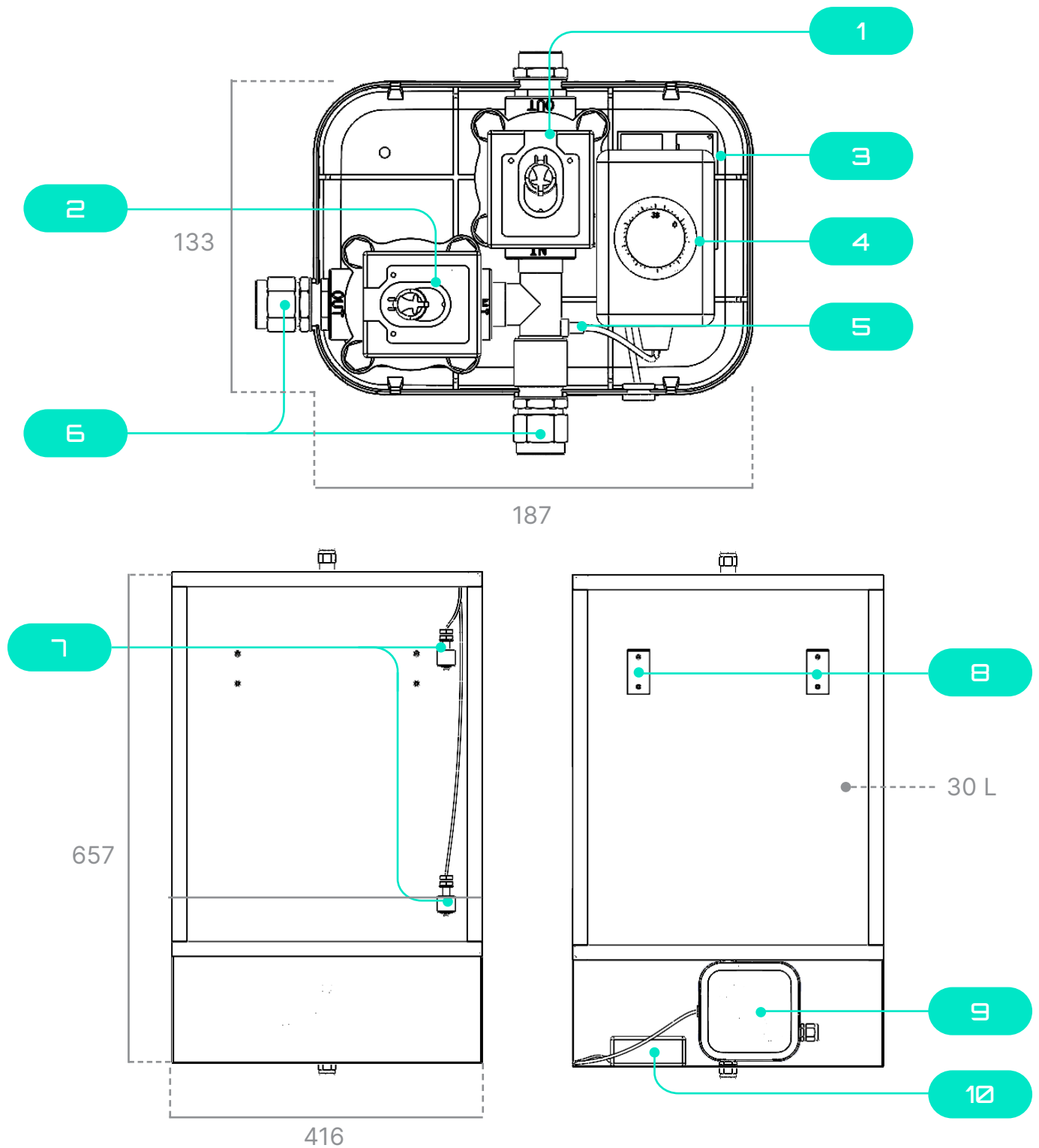
This system saves water by collecting the cold water from your shower and using it to flush the toilet. It automatically redirects the water based on temperature and tank levels, helping you reduce water waste without changing your daily routine.



*The system is created by team Azuloop for the European Project Semester that lasted from February - June 2025*



# Product Overview





# List of Components

## AzuLoop

1. Solenoid valve NO
2. Solenoid valve NC
3. Micro-controller
4. Thermostat
5. Temperature sensor
6. Adapters

## Tank

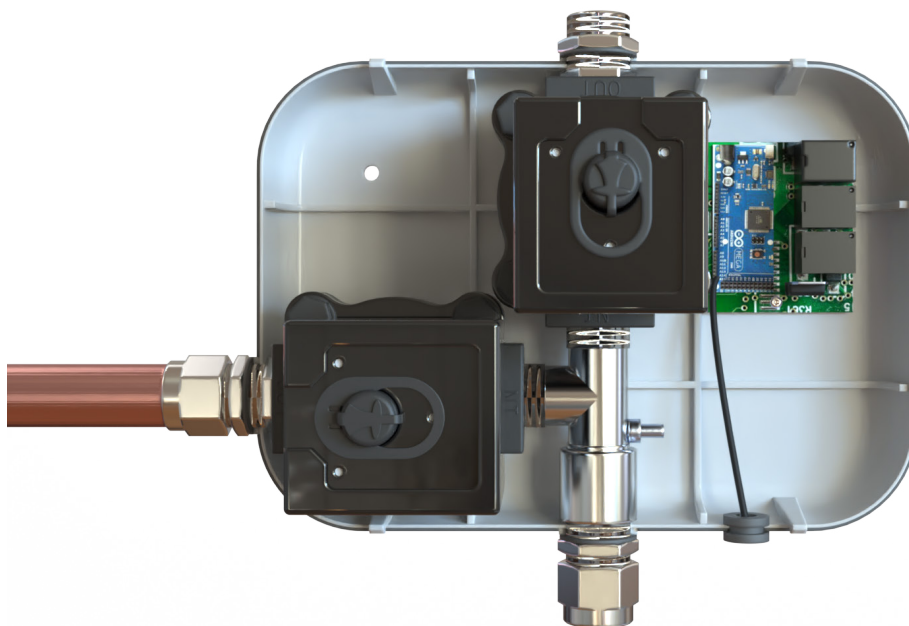
7. Float-level sensors
8. L-profiles
9. Tank electronics
10. Power supply





# Functioning of AzuLoop

- The temperature sensor monitors the incoming water temperature.
- If the water is below the set temperature, a signal is sent to the microcontroller.
- The system closes the valve to the showerhead and opens the valve to the storage tank.
- Cold water is diverted into the storage tank instead of flowing to the user.
- The system continues to monitor the temperature as water heats up.
- Once the water exceeds the user-defined minimum temperature, the valves switch:
  - The tank valve closes
  - The shower valve opens
- Warm water now flows to the showerhead for use.
- These valve positions are maintained until the next time the system is activated.







# Functioning of the Storage Tank

- A high-level sensor monitors when the storage tank is full.
- If the tank reaches maximum capacity, the system closes the valve to the tank.
- Cold water is then redirected to the shower as normal.
- A low-level sensor checks whether there is enough stored water to flush the toilet.
- If sufficient water is available:
  - The system opens the valve under the tank
  - The toilet is flushed using stored water
- If there is not enough water:
  - The valve remains closed
  - The toilet is filled using the regular water supply

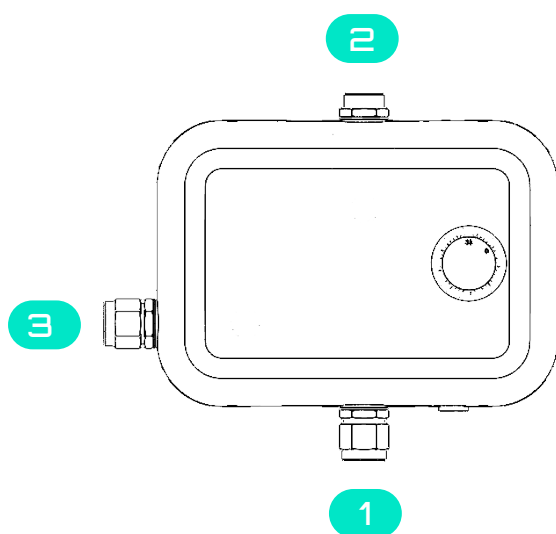
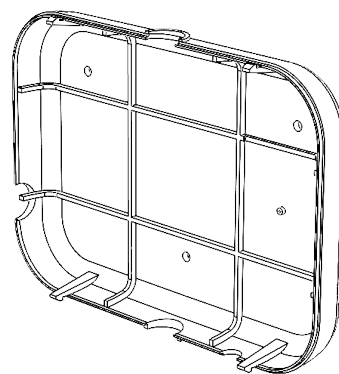




# Guide to the Installation

Installation by our certified technicians is included in the purchase price of AzuLoop. However, if you prefer to install the system yourself, please follow the simple steps below:

- Open the AzuLoop case and carefully remove the entire electronics assembly.
- Mount the bottom half of the case to the bathroom wall through the three provided holes.
- Reinsert the electronics assembly into the case.
- Snap the top half of the casing onto the bottom half until it clicks firmly in place with the sticky rubber seal in between.

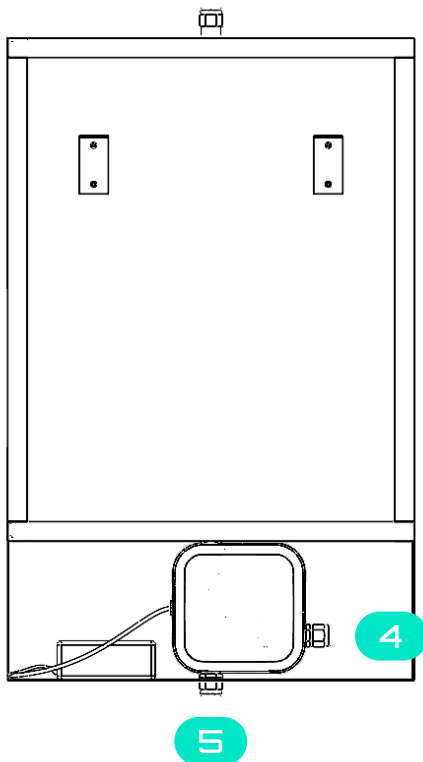
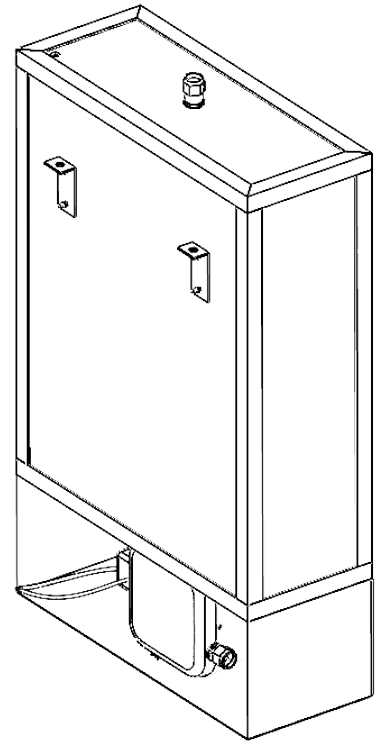


- Connect the plumbing:
  - Use the provided adapters to connect:
    - 1** A pipe from the shower mixer to the AzuLoop inlet
    - 2** A pipe from the AzuLoop outlet to the shower hose
    - 3** Attach a copper pipe to the side outlet of AzuLoop to guide cold water to the storage tank



# Guide to the Installation

- Mount the storage tank above the toilet using the included L-brackets
  - Hang it on the pre-installed wall profile above the toilet.
- Connect the copper pipe from the shower part to the adapter above the tank



- Connect the tank system:
  - 4 Attach the side port of the electronics casing under the tank to the main water supply
  - 5 Connect the bottom of the tank to the toilet tank using a copper pipe

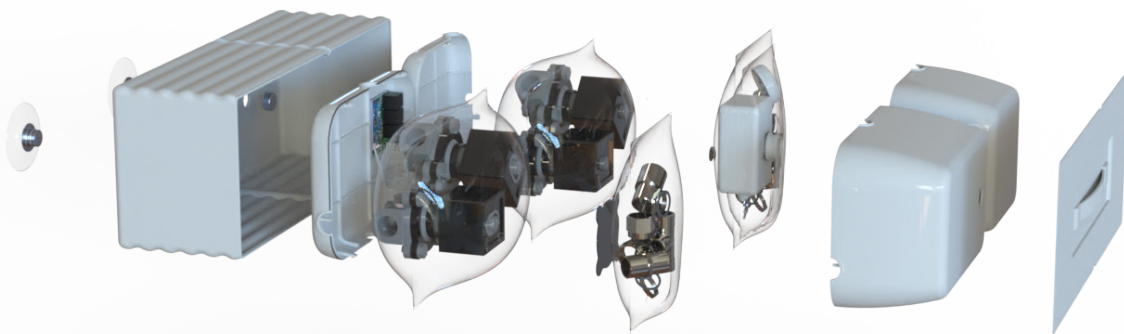


## After-Use of Packaging

To ensure maximum protection during transport, AzuLoop and its storage tank electronics are packed together in a specially designed protective box. This box is not only for safe delivery, it's designed for a second life.

Here's how to reuse it:

- Tear off the top edge of the box along the perforation line to create an opening.
- Slide off the lid to access the product inside.
- Remove the AzuLoop system and take out the small accessory pack.
- Screw the included suction cups into the designated holes on the back of the box.
- Stick it on your bathroom wall; it now serves as a shampoo and soap holder, perfectly matching the AzuLoop aesthetic.





# Warranty Conditions

This product includes a 2-year limited warranty from the date of purchase.

## **What the warranty covers**

- Defects in materials or workmanship under normal residential use
- Malfunctions of electronic components, valves, or sensors not caused by misuse

## **What the warranty does not cover**

- Damage resulting from improper installation, unauthorized modifications, or relocation
- Water damage due to inadequate sealing or use outside specified conditions
- Normal wear and tear, misuse, or neglect

## **Warranty claim process**

To initiate a warranty claim:

- Contact our customer support team with your proof of purchase and a detailed description of the issue.
- Our team will assess the claim and may request additional information or inspection.
- If the claim is approved, we will, at our discretion, repair or replace the defective component or product.

*Note: The warranty is valid only for products installed and used in accordance with the provided instructions and guidelines.*



# Safety Guidelines

To ensure safe and reliable use, please follow these safety instructions:

- Have the system installed by a certified professional
  - This ensures proper function, safety, and warranty coverage.
- The system is waterproof and safe for wet areas
  - All electronics are enclosed in sealed, water-resistant housings (IP-65).
- Do not open or modify the electrical components
  - Tampering may cause malfunction and void the warranty
- Keep the unit connected to power as instructed
  - Interrupting power may affect valve and sensor functionality.
- Check for leaks or visible damage periodically
  - If something seems wrong, contact support before continuing use.
- Keep away from children
  - The system is not a toy and should not be tampered with.



## Frequently Asked Questions

Q: Is it safe with electronics in the shower?

A: Yes. All electronic components are fully waterproof and safely enclosed in a water-resistant (IP-65) casing. It is designed to operate safely in wet environments like bathrooms and complies with relevant electrical safety standards.

Q: Can I move the tank or the Azuloop after installation?

A: Yes but if you need to move it, consult a professional installer.

Q: Do I need to do anything while showering to make the system work?

A: No. The system works automatically. It detects water temperature and tank levels, and switches flow directions without any action required from you.

Q: What happens if the tank is full?

A: The system detects when the tank is full and redirects the water back to the shower, preventing any overflow.

Q: Will this affect my shower pressure?

A: No. The system is designed to maintain normal water pressure for both the shower and toilet.

Q: Is the water used for flushing clean?

A: Yes. It only stores clean, unused cold water

Q: Can I install this in any home?

A: The system is compatible with most standard plumbing setups, but professional installation is required.

Q: Will the toilet always flush with shower water?

A: Only if there is enough stored water in the tank. If not, it will automatically use the regular water supply.

# Let's stay in touch

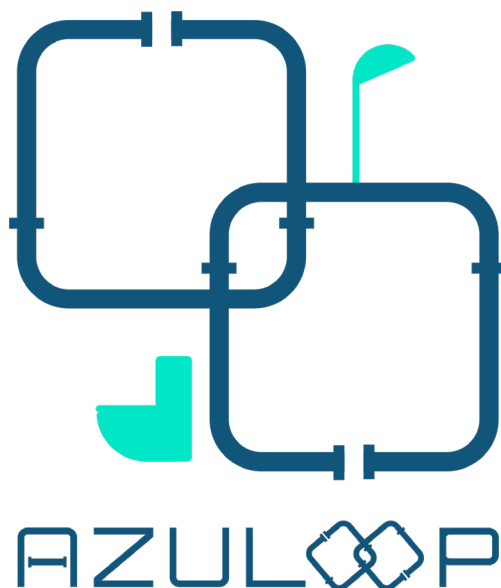


## Our website

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## Further information

<https://www.eps2025-wiki4.dee.isep.ipp.pt/doku.php?id=start&do=>

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